

reflection rather than the mutually perpendicular encoder wheels shown in the embodiment shown in Figs. 6a-6b

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What is claimed is:

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1. ~~A pointing device capable of changing the appearance of a display,~~
comprising:
a housing having a cover and a base;
5 a single spool cable receiver rotatably mounted to the housing;
a cable having a first end and a second end with the second end mounted to the
cable receiver,
wherein the pointing device has a first mode with a first portion of the cable having a
first length external to the pointing device and a second portion of the cable wound
10 around the cable receiver; and a second mode with the first portion of the cable having
~~a second length external to the pointing device less than the first length.~~

2. The pointing device of claim 1, wherein the pointing device has a third mode
with a third portion of the cable having a third length external to the pointing device
15 less than the first length and greater than the second length.

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3. ~~The pointing device of claim 1, further comprising a switch which is activated~~
to generate a pointing signal to the display.

20 4. ~~The pointing device of claim 3, further comprising a switch which is~~
~~capactively coupled to the cable receiver~~

5. The pointing device of claim 1, further comprising a tracking device which
generates signals based on movement of the pointing device, the signals controlling
25 the movement of a reference on the display.

6. The pointing device of claim 5, further comprising a switch which is activated
to generate a pointing signal to the display.

30 7. The pointing device of claim 5, wherein the tracking device is mounted to the
cable receiver.

8. The pointing device of claim 7, further comprising:
a reference stop, and
a detent,

5 wherein the detent aligns the cable receiver to the housing.

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9. ~~The pointing device of claim 5, wherein the tracking device further comprises
an optical sensor for optically monitoring movement of the pointing device.~~

10 10. The pointing device of claim 1, further comprising:
a reference stop, and
a detent,

wherein the detent aligns the cable receiver to the housing.

15 11. The pointing device of claim 1, wherein the cable is shielded.

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12. ~~The pointing device of claim 1, wherein the cover further comprises a lid,
wherein the lid is disposed in an open position when the cable is being wound around
the cable receiver and the lid is disposed in a closed position when covering the cable
receiver.~~

20 13. The pointing device of claim 1, further comprising:
a rotatable disk affixed to the cable receiver,
wherein the cover further comprises an opening in the cover and the rotatable disk is
25 disposed within the opening in the cover;
wherein the rotatable disk has a rotatable disk top further comprising:
a depression formed in the exterior surface of the rotatable disk top, the
depression having a diameter; and
an aperture within the depression less than the diameter of the
30 depression.

14. ~~The pointing device of claim 1, further comprising:
a connector attached to the cable at the first end, and
a connector receiver formed in the housing which accepts the connector.~~

5 15. The pointing device of claim 1, further comprising
a rotary connector coupling the cable to the tracking device.

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10 16. ~~The pointing device of claim 1, further comprising
a rotatable control circuit mounted to the cable receiver for producing position
signals in response to movement of the housing; and
a tracking mechanism disposed in the housing coupled to the rotatable control
circuit for generating signals in response to movement of the housing.~~

15 17. The pointing device of claim 16, further comprising:
a reference stop, and
a detent,
wherein the detent aligns the cable receiver to the base.

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20 18. ~~The pointing device of claim 16, wherein the rotatable control circuit further
comprises:
first and second transducers for receiving user commands indicating
movement of the housing and producing first and second position signals in response
thereto.~~

25 19. The pointing device of claim 18, wherein the tracking mechanism further
comprises: a first wheel with a polygonal outer surface rotatably mounted relative
to the housing; and
a second wheel rotatably mounted relative to the housing,
wherein the first transducer is operably coupled to the first wheel producing a first
30 ~~signal and the second transducer is operably coupled to the second wheel producing a~~

second signal in response to rotation of the first and second wheels in response to movement of the housing.

20. The pointing device of claim 1, further comprising:

a rotatable disk mounted to the cable receiver; and
a slot in the housing, wherein the rotatable disk protrudes through the slot.

21. The pointing device of claim 1, further comprising:

a spring attached to the spool for rotating the spool in a first direction causing the cable to wind onto the spool; and
a latching mechanism mounted to the housing.

22. A pointing device capable of changing the appearance of a display, comprising:

a housing having a cover and a base;
a cable receiver rotatably mounted to the housing;
a cable having a first end and a second end with the second end mounted to the cable receiver, where a majority of the cable is capable of being unwound from the cable receiver,

wherein the pointing device has a first mode with a first portion of the cable having a first length external to the pointing device and a second portion of the cable wound around the cable receiver, and a second mode with the first portion of the cable having a second length external to the pointing device less than the first length.

23. A pointing device capable of changing the appearance of a display, comprising:

a housing having a cover and a base;
a cable receiver rotatably mounted to the housing;
a cable having a first end and a second end with the second end mounted to the cable receiver, where the cable is essentially continuously wound in a first direction around the cable receiver,

wherein the pointing device has a first mode with a first portion of the cable having a first length external to the pointing device and a second portion of the cable wound around the spool; and a second mode with the first portion of the cable having a second length external to the pointing device less than the first length.

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A system, comprising:

a computer;

a display, and

a pointing device, wherein the pointing device is capable of changing the appearance of a display, the pointing device further comprising:

a housing having a cover and a base;

a single spool cable receiver rotatably mounted to the housing;

a cable having a first end and a second end with the second end mounted to the cable receiver,

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wherein the pointing device has a first mode with a first portion of the cable having a first length external to the pointing device and a second portion of the cable wound around the cable receiver; and a second mode with the first portion of the cable having a second length external to the pointing device less than the first length.

20 25.

A system, comprising:

a computer;

a display, and

a pointing device, wherein the pointing device is capable of changing the appearance of a display, the pointing device further comprising:

a housing having a cover and a base;

a cable receiver movably coupled to the housing;

a cable having a first end and a second end with the second end mounted to the cable receiver;

a tracking device disposed within the housing;

a rotary connector coupling the cable to the tracking device,

wherein the pointing device has a first mode with a first portion of the cable having a first length external to the pointing device and a second portion of the cable wrapped around the cable receiver; and a second mode with the first portion of the cable having a second length external to the pointing device less than the first length.

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26. A system, comprising:

a computer;

a display, and

a pointing device, wherein the pointing device is capable of changing the

10 appearance of a display, the pointing device further comprising:

a housing having a cover and a base;

a cable receiver movably coupled to the housing;

a cable having a first end and a second end with the second end
mounted to the cable receiver;

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a rotatable control circuit for producing position signals in response to
movement of the housing mounted to the cable receiver; and

a tracking mechanism for generating signals in response to movement
of the housing disposed in the housing,

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wherein the pointing device has a first mode with a first portion of the
cable having a first length external to the pointing device and a second portion of the
cable wrapped around the cable receiver; and a second mode with the first portion of
the cable having a second length external to the pointing device less than the first
length.

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27. A method for storing a cable with a connector in a housing containing a cable
receiver with a connector receiver and the connector coupled to a computer,
comprising the steps of:

disconnecting the cable from a computer;

opening the lid;

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~~rotating the rotatable disk to wind the cable around the cable receiver;~~

inserting the connector into the connector receiver; and
closing the lid.

28. The method of claim 27, wherein the winding step further comprises the step
5 of inserting a stylus into an aperture and rotating the rotatable disk to wind the cable
around the cable receiver.

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